

CLAIMS

The following represents the current status of all the claims in the present application including changes made by this paper:

1-134(canceled).

135(currently amended). A kit for the transfection of a male non-human vertebrate's germ cells, comprising:

- (a) at least one transfecting agent, wherein said at least one transfecting agent is selected from the group consisting of viral vectors;
- (b) at least one polynucleotide encoding a gene product in operable linkage with a promoter, in the presence of a gene delivery mixture comprising at least one transfecting agent, as in (a), and optionally a polynucleotide encoding a genetic selection marker; and
- (c) wherein said kit is directed to and includes instructions for using said kit to transfect a male non-human vertebrate's germ cells.

136(currently amended). The kit of claim 135, wherein ~~the~~ said at least one transfecting agent is comprises a viral vector selected from the group consisting of ~~liposomes, viral vectors,~~ transferrin-polylysine enhanced viral vectors, retroviral vectors, lentiviral vectors, and uptake enhancing DNA segments, or comprises a mixture of any members of said group.

137(previously presented). The kit of claim 135, wherein the transfecting agent comprises a viral vector selected from the group consisting of retroviral vectors, adenoviral vectors, transferring-polylysine enhanced adenoviral vectors, human immunodeficiency virus vectors, lentiviral vectors, Moloney murine leukemia virus-derived vectors, mumps vectors, DNAs that facilitate polynucleotide uptake by and release into the cytoplasm of germ cells, or comprises an operative fragment of- or mixture of any members of said group.

138(withdrawn). The kit of claim 135, wherein the transfecting agent comprises an adenovirus vector having endosomal-lytic activity, and the polynucleotide is operatively linked to the vector.

139(withdrawn). The kit of claim 135, wherein the transfecting agent comprises a lipid transfecting agent.

140(withdrawn). The kit of claim 135, wherein the transfecting agent further comprises a c-kit ligand.

141(withdrawn). The kit of claim 135, further comprising an immunosuppressing agent.

142(withdrawn). The kit of claim 141, wherein the immunosuppressing agent is selected from the group consisting of cyclosporin and corticosteroids.

143(currently amended). The kit of claim 135, wherein the any included genetic selection marker comprises consists of a gene expressing a detectable product ~~driven by a spermatogonia~~

~~specific promoter.~~

144(previously presented). The kit of claim 135, wherein said promoter is selected from the group consisting of c-kit promoter, b-Myb promoter, c-raf-1 promoter, ATM (ataxia-telangiectasia) promoter, RBM (ribosome binding motif) promoter, DAZ (deleted in azoospermia) promoter, XRCC-1 promoter, HSP 90 (heat shock gene) promoter, and FRMI (from fragile X site) promoter.

145(currently amended). The kit of claim 135, ~~wherein~~ including at least one polynucleotide ~~comprises that~~ consists of at least one polynucleotide sequence encoding a genetic selection marker.—.